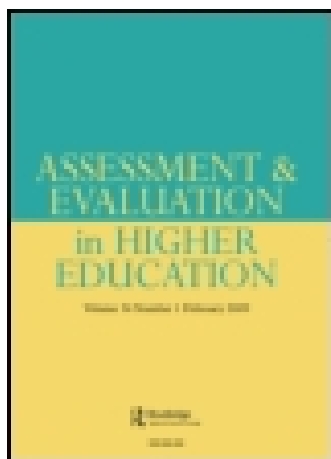


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## Can you increase teacher engagement with evaluation simply by improving the evaluation system?

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We know various factors can influence how teaching staff engage with student evaluation, such as institutional policies or staff beliefs. However, little research has investigated the influence of the technical processes of an evaluation system. In this article, we present a case study of the effects of changing the technical system for administering student evaluations at one New Zealand university. We develop a socio-technical model of the institutional evaluation system, and use this model to examine whether introducing an online system for ordering student feedback questionnaires and reducing processing time influenced academic staff engagement with evaluation. Survey responses, interview comments and data about ordering trends suggest the change did increase staff engagement by: (1) improving staff perceptions of evaluation and (2) increasing engaged behaviour, such as voluntarily ordering more evaluations. The outcomes of this study imply that the ‘practical implementation’ of an evaluation system is an important factor in influencing engagement with evaluation. We conclude that we can increase teacher engagement with evaluation simply by improving the ‘practical implementation’ of the evaluation system.

**Keywords:** student evaluation; teacher perceptions; engagement; socio-technical approach

### Introduction

Formal evaluation systems (typically comprising student feedback questionnaires) are commonplace in higher education institutions. Often required by institutions as a means to evaluate various aspects of teaching and course design, several studies have shown that teaching staff generally accept the requirement of using an institutional evaluation system (e.g. Beran and Rokosh 2009; Ory and Ryan 2001; Stein et al. 2012). However, these studies also show that there is considerable variation in how staff members ‘engage’ with the practice of evaluation.

‘Engagement’, in this context, is the extent to which a staff member values and participates in the practices of their institutional evaluation system. Engagement is indicated by a staff member’s perceptions of evaluation, how often they voluntarily order evaluations and how they use evaluations. We classify engagement into three broad levels:

- (1) Staff merely comply with mandated evaluation policies.
- (2) Staff see formal evaluation systems as useful for informing institutional processes, such as promotion, and they use them for these purposes.

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- (3) Staff see formal evaluation systems as useful for informing and developing teaching and learning, and they use them for these purposes.

For many tertiary institutions, it is difficult to motivate and encourage staff to engage with evaluation beyond the first level, and they are not always successful (e.g. Crews and Curtis 2011; Edström 2008; Gonyea and Gangi 2012; Hendry, Lyon, and Henderson-Smart 2007).

Recently, Stein et al. (2012, 2013) completed a large-scale study of staff engagement with evaluation at three New Zealand tertiary institutions. Their results indicated that staff engagement is influenced by three domains:

- (1) *Institutional context* refers to ‘institutional expectations’ (Stein et al. 2012, 161) or *the purposes* an evaluation system serves for the institution. Common purposes include monitoring the quality of departmental teaching and learning, and informing institutional decisions, such as promotion or long-term strategic planning.
- (2) *Individual perceptions* refers to staff members’ ‘stories, myths, emotions and experiences related to evaluation’ (Stein et al. 2012, 161). This includes personal beliefs about teaching and learning, beliefs about evaluation, and career goals and motivations.
- (3) *Practical implementation* comprises ‘the ways [an] institution operationalises its policies around evaluation’ (Stein et al. 2012, 161) or *how* an institution implements a formal evaluation system. Influential factors in this domain include the evaluation instruments themselves (e.g. the design of questionnaires), the timing of evaluations and how results are analysed and reported.

In this article, we investigate the influence of *practical implementation* on staff engagement with evaluation at one institution from the Stein et al. (2012) study.

Most research about evaluation in higher education has been related to *individual perceptions* or *institutional context*. These two domains seem to most influence how academic staff think about and use the formal evaluation system at their institution (Stein et al. 2012, 2013). Staff level of engagement with evaluation typically depends on: the alignment between institutional and personal expectations about how evaluations should be used; whether they believe students can offer appropriate feedback on teaching; and whether evaluating teaching and learning is essential to their personal teaching philosophies (Stein et al. 2012).

Other research on staff *perceptions* of evaluation includes whether staff regard student ratings questionnaires as reliable measures of teaching and course design (Benton and Cashin 2012) and whether they see evaluation as contributing to their professional development (e.g. Kember, Leung, and Kwan 2002; Ory and Ryan 2001; Smith 2008).

Studies on the *institutional context* of evaluation processes tend to focus on how institutions use evaluations for multiple purposes, and how this affects staff. Staff can be mistrustful of formal evaluation tools that are used for *both* quality monitoring and teaching development, and it is common for studies to examine the clash between institutional needs and individual practices (Bamber and Anderson 2012; Edström 2008; Penny and Coe 2004). There are also broader studies about staff disengagement with institutional quality processes in general (including student evaluation systems). For example, Newton (2000) identifies several reasons for staff

disengagement: staff may see quality monitoring as merely ‘ritualistic’ and not related to quality ‘enhancement’; staff might not feel ownership of processes imposed from the top-down; and staff might regard quality monitoring as policing bad teaching, rather than recognising good teaching.

Some studies have examined the *practical implementation* of evaluation systems, for example, differences between administering in-class or online evaluation questionnaires (e.g. Dommeyer et al. 2004; Nulty 2008). However, these studies investigate the effects on *student* engagement, such as response rates and overall evaluation scores, rather than *staff* engagement, as is our focus.

Little research has focused on the specific effects that the *practical implementation* of an evaluation system can have on how *staff* view and use evaluations. A possible exception is Rienties (2014), although this study mainly explores staff resistance to a transition to online evaluations, rather than broader effects on staff engagement with evaluation.

The results of Stein et al. (2012) suggest that when *practical implementation* does influence staff engagement with evaluation, it does so primarily as an intermediary effect of the institutional domain. For example, when staff stated that the survey instruments affected their engagement, the underlying issue was typically a direct consequence of institutional policies, such as specifying the questions available for inclusion (Stein et al. 2012).

We argue that it is valuable to examine the direct effects of *practical implementation* on engagement with evaluation, since *practical implementation* has been shown to be an important influence on attitudes and behaviours in other contexts. For example, socio-technical theory illuminates the effects of technologies and processes on perceptions and behaviour in a variety of organisational contexts – both in corporate entities, such as industrial facilities or office/clerical environments, and non-corporate entities, such as universities, hospitals or government departments (e.g. Geels 2004; Mumford 2006). Socio-technical theory leads us to believe that technical aspects of an evaluation system will have an impact on the staff using it. Socio-technical theory is explained in more detail later in this article.

The case study reported in this article investigates whether *practical implementation* changes made to the formal evaluation system at the University of Otago had any influence on staff engagement with evaluation. The University of Otago, one of the institutions investigated in Stein et al. (2012, 2013), is a research and teaching university in New Zealand with approximately 19,000 students. This university does not carry out standardised, mandatory evaluations, but does provide an evaluation service (based primarily on student feedback questionnaires) for staff to voluntarily solicit feedback on teaching for professional development. Teaching staff are required to provide some evidence of teaching evaluation for job confirmation and promotion, and they almost always use the formal student questionnaires. Individual departments can also use the system to evaluate courses (typically on a three-yearly cycle).

The University of Otago’s Evaluation Service is a semi-autonomous unit responsible for organising and processing the formal student questionnaires. Some aspects of the institutional evaluation system (e.g. policies related to promotion processes) are determined or approved by senior management; however, the technical implementation of the system is the responsibility of this group. Recently, the Evaluation Service changed two aspects of the *practical implementation* of student evaluations at the University of Otago – a change to the processing strategies in 2010 and a

change to the ordering system in 2012. We outline these changes and discuss their impact on staff engagement with evaluation.

### *Changes to the practical implementation of student evaluations at the University of Otago*

From roughly 2001 until August 2012, staff at the University of Otago would typically follow these steps to order a student feedback questionnaire:

- (1) The staff member would download and print a paper request form from the Evaluation Service's website.
- (2) They would also separately download a catalogue of pre-approved questions.
- (3) To indicate which questions they wanted to include from the catalogue, the staff member would write the catalogue ID number of each question on the request form.
- (4) They would then fill in other details like their name, department and class size, and mail the completed form to Evaluation Services.
- (5) From the request form, Evaluation Services would either: (a) produce a master questionnaire for paper-based evaluations, which is then mailed back to the staff member; or (b) set up an online questionnaire.
- (6) The questionnaires would then be distributed to students. For paper-based evaluations, questionnaires are usually distributed in-class by a student representative; for online evaluations, students are emailed a link to the online questionnaire by Evaluation Services. Completed paper forms are then manually collected and returned to Evaluation Services; online questionnaires are automatically stored by the online system.
- (7) Evaluation Services would then process the completed questionnaires and mail the results to the staff member.

Staff often gave negative feedback about *practical implementation* aspects of this process. For example, many staff thought that referencing question catalogue ID numbers was 'confusing', as it was difficult to remember which number referred to which question. Staff also expressed dissatisfaction with the length of time taken to process the completed questionnaires and return the results, which was largely due to the length of time needed to manually handle the questionnaires.

Based on staff feedback, Evaluation Services improved two aspects of the *practical implementation* of the evaluation system. Throughout 2010, they developed more efficient systems for processing questionnaires and handling the resulting data. This saw the average turnaround time for questionnaires drop from six to three weeks. While staff were not explicitly told that changes were made to the processing step, the impact would have been noticeable in the faster turnaround time.

In 2012, Evaluation Services addressed feedback about the ordering process by offering an online ordering system called *Otago InForm*. This system was piloted with staff in August of 2012, as a voluntary alternative to ordering evaluations using paper forms.

*Otago InForm* is an online system for teachers to design and request student feedback questionnaires. It was designed to make questionnaire ordering easier and

faster for staff. The system introduces no changes to the institutional requirements for student evaluations: there are no changes to what questions can be asked (compulsory or optional), how many questions can be asked or how the evaluations are used by the institution.

*Otago InForm* was designed to address *practical implementation* concerns raised by academic staff. For example, to aid staff in selecting questions, a live preview of the finished questionnaire is displayed constantly onscreen. As users add and remove questions, the preview updates, allowing staff to maintain an overview of their request at all times. Question catalogues and supplementary help are available via ‘popup’ panels, which can be clicked visible or hidden as required, meaning staff do not need to consult external information sources while filling in their request. All changes are automatically saved, and the system ensures incomplete requests cannot be submitted (which slowed down set-up times by Evaluation Services using the old system). Completed requests are emailed to Evaluation Services, thereby reducing the overall time for ordering evaluations.

At the start of 2013, over half of all questionnaires were ordered through *Otago InForm*, increasing to approximately 70% by April. The majority of staff using *Otago InForm* confirmed that ordering questionnaires was easier and faster as compared with the previous paper-based process.

### **Socio-technical theory, practical implementation and engagement with evaluation**

Positive feedback from staff following these changes, coupled with the strong uptake of *Otago InForm*, caused the authors to wonder whether previously identified *practical implementation* issues (e.g. confusing question selection, lengthy processing times and errors on request forms) could have been negatively influencing staff engagement with evaluation. The current study sought evidence that the practical improvements of the system had a positive effect on the way staff at Otago think about and use evaluation.

To explore how *practical implementation* might affect staff engagement with evaluation, we first needed a general model or theory to explain how ‘practical’ aspects of a process impact on perceptions and behaviour. Socio-technical theory provided such a useful framework.

Socio-technical theory provides a general model of the relationships between people, processes and technologies. Specifically, an organisation is analysed as various interacting subsystems, categorised as either social (individuals and groups, their relationships, attitudes and conventions) or technical (technologies, tasks and processes) (Chai and Kim 2012). These subsystems are always interconnected in practice, but ‘for analytical purposes ... it is useful to distinguish [them], so that interactions can be investigated’ (Geels 2004, 904).

There are a number of ways to represent the subsystems in a socio-technical model depending on the relationships of interest, and there are several, nuanced socio-technical subtheories, such as actor-network theory, social construction of technology and social shaping of technology (Sawyer and Jarrahi 2014). However, for the purposes of this study, we are interested merely in a general socio-technical framework with which to develop our understanding of how engagement fits within the institutional evaluation system.

We represent the entirety of evaluation processes and practices in the following general socio-technical model:

- One social subsystem representing the human actors (academic teaching staff), their behaviours and perceptions. This is where we locate engagement with evaluation.
- One social subsystem representing the institution and the rules or policies that coordinate the activities of the actors.
- One technical subsystem encompassing evaluation technologies (e.g. *Otago InForm*) and processes (e.g. the processing strategies), which we call *practical implementation*.
- The relationships between each of these subsystems (simplified in Figure 1).

This model is based on Geels (2004), and adapted by incorporating the three domains from Stein et al. (2012): *institutional context*, *individual perceptions* and *practical implementation*.

The relationships in our socio-technical model help identify what influences teachers' perceptions and behaviours about evaluation. The *institution/rules* subsystem directly affects *human actors/social groups* by imposing limitations on teacher behaviour and attitudes, for example, by specifying that a promotion requires

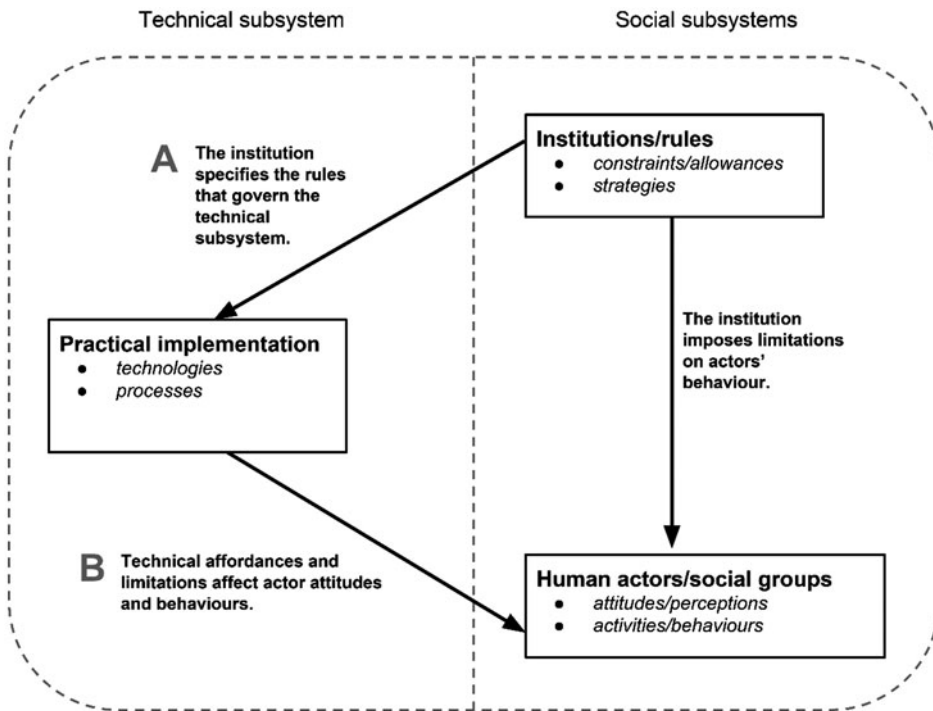


Figure 1. Socio-technical model showing influential relationships between the technical subsystem and the two social subsystems: the institution and the actors. Relationship A indicates the direct influence of the institution on the technical subsystem; relationship B indicates the direct influence of the technical subsystem on actors.



evidence of evaluation. *Institution/rules* also specifies the allowances and restrictions of the technical subsystem, for example, by specifying which questions are compulsory in an evaluation questionnaire. As teachers interact with the resulting *practical implementation* of the technical subsystem, their experiences invariably impact back on their attitudes and behaviours (*human actors/social groups*), for example, frustration due to technical limitations.

As discussed above, the impact of *practical implementation* on *human actors/social groups* was explored by Stein et al. (2012), but only where technical features were directly determined by the *institution/rules* (where relation A directly determines relationship B in Figure 1). In these cases, it appears that the *institution/rules* subsystem was ultimately influencing engagement with evaluation.

For this study, we were interested in the direct relationship between *practical implementation* and *actors*; specifically, where features of the technical subsystem were not determined by institutional guidelines or policies, and so where the *institution/rules* could not be the ultimate influence on *actor* engagement with evaluation (relationship B from Figure 1 isolated from other relationships).

We judged that the two changes to the Otago evaluation system (improved processing strategies and the introduction of *Otago InForm*) offered an opportunity to isolate and investigate the effects of *practical implementation* on staff engagement with evaluation. First, no changes had been made to the institutional requirements or recommendations for evaluation use since 2001, so the *institution/rules* subsystem would not be the ultimate influence in this scenario. Second, there were no other significant changes to the *practical implementation* during the same time period; any tweaks to the system – for example, offering staff the option of conducting their evaluations online, introduced ca. 2009 – did not appear to have any significant bearing on staff engagement (see Finding 2 for illustration of the consistency of staff behaviour related to ordering evaluations). Third, the processing strategies and *Otago InForm* were developed specifically to respond to *practical implementation* issues, as highlighted by staff. As such, we predicted that any observed changes in engagement would be a direct result of addressing these issues. Figuring that any observed changes could be attributed to the two changes in *practical implementation*, we were able to investigate whether this domain on its own could affect staff engagement with evaluation. To identify changes in staff engagement, we looked at both perceptions and behaviour.

### **Finding 1: changing the *practical implementation* resulted in increased positive staff perceptions of the evaluation process**

Staff perceptions of the evaluation process provide one measure of ‘engagement’. As Stein et al. (2012) discuss, staff hold perceptions (positive, neutral and negative) of all aspects of their formal evaluation system. These perceptions can influence their overall opinion of, and level of participation in, the evaluation process. Formal evaluation systems that fail to meet staff expectations (regardless of whether those expectations are reasonable or accurate) will impact negatively on engagement. Put another way, staff are more likely to engage with their institutional evaluation system if they also express confidence in the instruments and operations of the process.

We compared staff perceptions of the evaluation process at Otago before and after we made changes to its *practical implementation*. In February 2010, before implementing new processing strategies and introducing *Otago InForm*, a university

survey gathered teachers' perceptions about the evaluation system (Higher Education Development Centre 2010). These results became baseline data for us to compare perceptions following the practical changes, allowing us to identify any changes in staff attitudes towards evaluation.

To collect data for comparison, we ran an online survey in July 2013 (after *Otago InForm* had been in use for approximately one year) using questions from the 2010 survey. Both surveys used five-point Likert-scale and open-ended questions. The survey questions sought feedback on staff general perceptions of the evaluation system at Otago (e.g. Q3. *How satisfied are you with the time it takes to receive the results of your evaluations?* Q5. *Overall how would you rate [Otago's] evaluation service?* Q6. *What do you think the evaluation service does well?* Q7. *How do you think the evaluation service could be improved?*).

We also included new questions in the 2013 survey to seek feedback on staff experiences with the *Otago InForm* ordering software (e.g. Q9. *How easy did you find completing the evaluation questionnaire request process using Otago InForm?* Q10. *Has moving from a paper-based to online request system changed the number of evaluations you have ordered?*). Semi-structured follow-up interviews were also conducted after the 2013 survey to elaborate the responses of three participants who had made more detailed comments about their experience with *Otago InForm*.

For both surveys, we invited participation from all university staff on record as having ordered a student evaluation within the previous five years, excluding staff who no longer worked at the university from the pool of eligible participants. In 2010, 999 eligible staff were invited to participate and 502 responded, giving a response rate of 50.3%. In 2013, we invited 1715 eligible staff to participate and 454 responded, giving a response rate of 26.5%.

A Mann–Whitney U-test revealed a significant difference between the Likert-scale results of the 2010 and 2013 surveys across all questions. To determine whether this difference reflected positive or negative changes in perceptions, we examined the interpolated median (IM) – the median of a set is adjusted up or down based on the distribution of responses falling above and below the median (see Xiao 2006). We found that staff perceptions towards the evaluation service improved across all questions between 2010 and 2013 (Table 1). Because the only changes to the evaluation process we noted during that time were technical changes to the way

Table 1. IM comparison of the 2010 and 2013 surveys' five-point Likert-scale results (1 = most positive result, except for † where 5 = most positive result), with Mann–Whitney U-test  $p$  values.

Question	2010 IM	2013 IM	Mann– Whitney $p$
How easy was it for you to find out how to order an evaluation questionnaire?	1.67	1.47	0.016
How satisfied are you with the time it takes to receive the results of your evaluations?	2.35	1.55	$p < 0.001$
† Would you find it valuable to have more guidance in interpreting the feedback received from your evaluations?	3.10	3.80	$p < 0.001$
How easy did you find completing the evaluation questionnaire request form?	1.72	1.47	0.006
Overall how would you rate [Otago's] evaluation service?	1.79	1.61	0.021

questionnaires were ordered and processed, we tentatively concluded that improved *practical implementation* was responsible for higher staff perceptions of evaluation.

### **Finding 2: changing the *practical implementation* had an impact on staff behaviour with regard to evaluation**

We used total number of student evaluation questionnaires ordered as a proxy measure for staff engaged behaviour: an increase in the total number of questionnaires ordered would indicate increased staff use of the evaluation system, and thus imply increased engagement with evaluation.

To verify if there had been an increase in the total number of questionnaires ordered since the *practical implementation* changes, we analysed aggregated annual request data from 2001 to 2013. As ordering totals fluctuated from year to year, we used Z-scores to determine if each year's total fell within an expected normal variation. Z-scores indicate how many standard deviations (SD) each result is from the mean, and can highlight significant outliers which cannot be attributed to normal variation. Figure 2 shows the Z-scores calculated for the ordering totals from 2001 to 2013: whether the Z-score is positive or negative shows whether the result deviates above or below the mean respectively; a Z-score of more than 2 SD (in either direction) indicates a non-typical score from the set. Each annual total from 2001 to 2012 (before the introduction of *Otago InForm*) fell within the expected limits of 2 SD. However, the 2013 total (2970 questionnaires) produced a Z-score of 2.49 SD, meaning it constituted a significant increase (i.e. not attributed to normal variation) over the totals of the previous 12 years ( $p = 0.006$ ).

To determine if the 2013 ordering total represented an actual shift in staff behaviour, rather than being merely an aberration, we plotted cumulative monthly ordering totals for 2009–2014 (Figure 3). As Figure 3 shows, the ordering trend of 2009–2012 is noticeably similar; however, the 2013 and 2014 trends, after *Otago InForm* was introduced, show a clear and consistent increase in the number of evaluations ordered. That the 2014 ordering behaviour is trending *even higher* than 2013

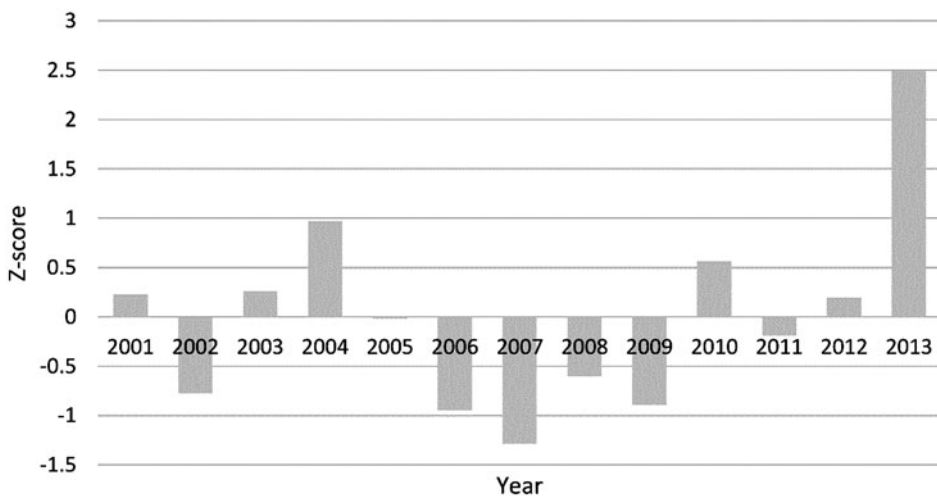


Figure 2. Calculated Z-scores for annual totals of questionnaires ordered, 2001–2013.

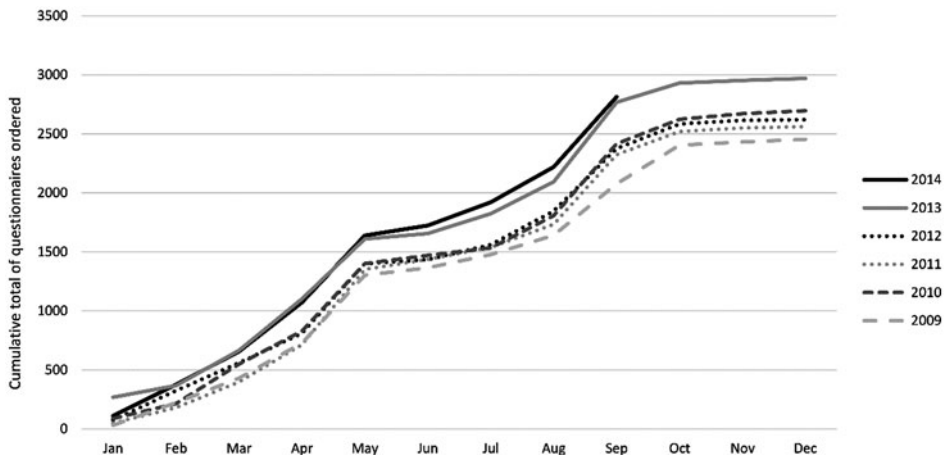


Figure 3. Cumulative monthly totals of evaluation questionnaires ordered, 2009–2014.

suggests that changing the ordering procedure has had a lasting impact on staff behaviour.

The combination of our findings – that following practical changes to the evaluation system, (1) staff perceptions towards the evaluation process at Otago improved and (2) the total number of questionnaires ordered increased – supports our hypothesis that improving the *practical implementation* of an evaluation system can improve staff engagement with evaluation. We attribute the observed increase in engaged behaviour to the *practical implementation* changes because: (a) *institutional* requirements for the use of evaluation remained unchanged during the time of this study and (b) we know of no other *human actor* changes which would be likely to influence staff behaviour, such as increased professional development or promotion of evaluation. However, there are a number of important questions and limitations to consider.

## Discussion

The data we collected suggest that an evaluation system with technical limitations will lessen engagement with evaluations, and improving the technical system can increase engagement. We conclude that the domain of *practical implementation* does play a significant role in influencing staff engagement with evaluation. If academic staff find the *practical implementation* of the formal evaluation process cumbersome or time-consuming, they will be less likely to evaluate beyond minimum requirements (the lowest level of engagement). They will, however, be more inclined to engage with evaluation beyond minimum institutional requirements if the practical process is simple and straightforward. For example, staff made the following comments about the new online ordering system:

when it was necessary to download things and put it together it took longer, so you'd put it off ... I probably did fewer of them, and I would do it closer to the end of the semester because you'd have to allocate enough time to go through the process because you knew it was a bit time-consuming. But with the online service now, it takes so much less time and it's so much less onerous that rather than putting it on your 'to do' list, you'll simply do it.

I much prefer the online thing – I am far more likely to do the evaluations if there are no impediments to ordering, and online makes it easier.

There are, however, several caveats to this conclusion because of the limitations of our study, and these suggest areas for future research.

Although we assert that staff engaged *more* with evaluation, it remains unclear whether staff were engaging with evaluation at a *higher level* (using the levels of engagement outlined in the introduction). Because we used a narrow proxy for measuring engagement – based on staff comments and ordering behaviour – we can conclude that staff ordered more evaluations, but cannot conclude what they used them for. As there was no change in institutional expectations, we inferred that they ordered evaluations for their own purposes, rather than just to meet institutional requirements (lower levels of engagement). Yet we cannot confirm if staff ordered more questionnaires to better inform their teaching (the highest level of engagement). It is possible that an easier ordering process simply allowed staff to meet institutional requirements or recommendations that they had hitherto been ignoring. Further research is needed to gather data about what staff do with evaluations they conduct.

Also, our data does not tell us whether the observed increase in engagement reflects a small increase in engagement by many staff or a large increase by a small number of staff. Nor do we know whether the *practical implementation* changes simply encouraged staff who always *intended* to engage more with the process or whether they motivated staff otherwise disinterested in evaluation.

Another important discussion point is the connection between staff being aware of the *practical implementation* of an institutional evaluation system, and their engagement with evaluation. One interviewee suggested that all aspects of the process (including *practical implementation*) invariably influence overall perceptions of evaluation:

Every small component of it leads you to have a feeling about the whole process. Whether or not you feel negative or positively about teaching evaluations anyway ... if the process of going about ordering and getting those evaluations done is easy and simple, that's gonna affect your view of the whole process, the whole thing.

However, our results suggest that while *practical implementation* can significantly impact staff engagement with evaluation, most staff do not notice this influence. Three main observations led us to this conclusion: most staff tend to focus on factors other than *practical implementation*; most staff do not notice or misunderstand changes made to the *practical implementation* of an evaluation system; and most staff could not conceive of a connection between *practical implementation* and engagement with evaluation.

First, when explaining their use of evaluations, staff tended to focus on factors related to their *individual perceptions* or the *institutional context*. For example, when asked general questions about the evaluation process in the 2013 survey, most staff comments were about the institution's use of evaluations or about personal beliefs about the value of evaluation for informing teaching. They had to be asked directly about the *practical implementation* before commenting on technical aspects of the process. This observation is consistent with the results of Stein et al. (2013), who also found that staff commented most often about *institutional context* and *individual perception* of evaluation use.

Second, staff were frequently unaware of any practical changes made to the Otago evaluation system, and if they were aware changes had been made, they often misunderstood these changes. For example, in the 2013 survey, after the implementation of new processing strategies which halved the processing time of evaluation results, many staff still commented that they did not understand why the processing took so long:

Is there some manual processing involved? After the data has been entered the rest of the process should be completely automatic. Yet still it takes many weeks to get the results.

It is an automated service. I would expect results within two weeks of administering the questionnaire.

Many staff also seemed unclear about what practical change was made to the ordering process. In the 2013 survey, 38% of respondents ( $n = 171$ ) indicated they had not used the *Otago InForm* system, and the majority of this group were unaware *Otago InForm* even existed. Of those who said they *had* used the system, several comments suggested that some of these respondents were confused as to what we meant by '*Otago InForm*' – several thought we were referring to giving questionnaires to students online, rather than to the online system, for ordering evaluations. For example:

[Otago InForm] works well, but I do not feel that it will be ever as much representative as the paper-based system. (filled in a classroom)

As the above comments suggest, staff seemed unaware of many aspects of the *practical implementation* of their institutional evaluation system. Similarly, they seemed to be ill-informed about changes to the system.

Third, most staff members made no connection between *practical implementation* and their engagement in the evaluation process. For example, the majority of respondents to the 2013 survey answered 'no' when asked whether or not moving from a paper-based to online request system changed the number of questionnaires they ordered ( $n = 209$ , 74.6%). Many of these respondents further commented that they did not see how *practical implementation* could affect their ordering behaviour, e.g. 'I'm not interested really in HOW I order Student Evaluations', 'The method would make no difference to how many evals I order' and 'It is just a way of ordering them so does not increase my need for them'. Some staff identified other factors they felt had more influence on their engagement with evaluations than the technical aspects of the process:

Even though InForm is easier to use, I consider teaching and course evaluations to be of high importance, hence regardless of the ordering process, I would order them.

Only use it because of promotion/progression requirements, therefore keep it to the minimum in case of negative result.

Number ordered is a balance between professional needs and concern about overloading students rather than difficulty of ordering questionnaires.

These quotes imply that even if staff were aware of changes to the evaluation system, most did not believe the *practical implementation* of the ordering process would influence their engagement with evaluation. This is consistent with the observation that staff tend to pay less attention to *practical implementation* than factors from the *institutional* or *actor* subsystems of the overall evaluation system.

A second possible interpretation is that the *practical implementation* of the evaluation system actually influenced only a small population of staff, and as such only a few staff engaged more because of practical changes.

Even though staff tend to ignore the *practical implementation* aspects of their formal evaluation system, our findings suggest that addressing technical limitations can lead to increased staff engagement. Further research is needed though, to explore the connection between staff awareness of technical aspects of the evaluation process and engagement – can engagement be maximised if staff are made aware of the importance of *practical implementation* or is it simply enough for institutions to ‘build it and they will come?’

We also need further research to clarify the relative degree to which *practical implementation* factors impact staff engagement with evaluation, as compared with the impact of *institutions/rules* and *human actors/social groups* (Figure 1). Would changes to either of these social systems – for example, changing evaluation policy or introducing new professional development for staff – have had a similar impact on engagement as the changes to *practical implementation*, or would the effect be greater or lesser?

Finally, can one domain enhance or detract from the influence of another domain? For example, if we changed the social systems *first*, would subsequent changes to the technical system result in the same, or greater or lesser, influence as making changes to the technical system alone? Similarly, could negative changes in one domain undermine positive changes in another, for example, if we introduced policies that discouraged evaluation, would improving the *practical implementation* still improve engagement?

Over the next few years, the authors of this article are involved in planned changes to the institutional requirements of evaluation at Otago, which will provide useful opportunities for future research into staff engagement with evaluation. By examining differences in perceptions and behaviour following various modifications to the evaluation system, we hope to be able to draw more definitive conclusions about how staff engage with evaluation. This will also allow us to: (1) refine the socio-technical model used to understand the relationships of subsystems in the evaluation system and (2) elaborate our description of the levels of engagement, from staff merely complying with evaluation policies to using evaluations to inform their teaching decisions.

## Conclusions

This study explored how the *practical implementation* of an institution’s student evaluation questionnaire system can affect teachers’ engagement with evaluation. We developed a socio-technical model of the evaluation system that was then used to study staff engagement with evaluation. We examined how two practical changes (a new system for ordering evaluations, *Otago InForm*, and the development of more efficient questionnaire processing strategies) impacted on staff participation in the evaluation process. Survey and interview data, and aggregated ordering statistics about how staff used the institutional evaluation system before and after changes were made, indicated changes in both perceptions and behaviour. We concluded that staff engagement with evaluation increased following the practical changes. We offer as contributions to the field our socio-technical model of evaluation systems and our conclusion that improving *practical implementation* can increase staff engagement.

Our results also suggest that the positive effects of *practical implementation* on engagement can be ‘backgrounded’ in the thinking of staff, who might not recognise the positive influence. This might explain why so little research has been done on the practical implementation of evaluations systems: we tend to overlook the potential effects of practical implementation. This is also an important consideration for institutions wishing to increase staff engagement with evaluation: improving practical aspects of the evaluation process might lead to increased engagement with evaluation regardless of how important such improvements may appear to staff.

One main limitation of this study was the narrow proxy for measuring engagement, but the authors also acknowledge a further limitation. We cannot definitively state that the practical changes were entirely responsible for observed changes in staff perceptions or ordering behaviour, since no controls were implemented. However, since no changes were made to (a) the institutional requirements for evaluation use or (b) the way staff were educated about evaluation at Otago, we judged that the *practical implementation* changes were the only relevant factors likely to lead to increased engagement. We cautiously make our conclusions on this basis.

Motivating and encouraging staff to engage with evaluation is an ongoing struggle for tertiary institutions. This study illuminates one potential approach for fostering engagement: if we change technical aspects of the formal evaluation system, and make it easier for staff to participate in the process, staff will engage more with the practice of evaluation. As such, an institution can increase staff engagement with formal evaluation processes simply by improving their technical systems.

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